

MATERIAL SAFETY DATA SHEET

**VIVANTIS TECHNOLOGIES SDN BHD
REVONGEN CORPORATION CENTER**

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SECTION 1: CHEMICAL IDENTIFICATION

Catalogue Number: PC0719-50kU; PC0719-100kU

Product Name: Deoxyribonuclease I (DNase I)

Intended Use:

For research use only. Not for use in diagnostic procedures.

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SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No.	%
DNase I	9003-98-9	95-100

Synonyms: Alkaline deoxyribonuclease; alkaline DNase; deoxyribonuclease; deoxyribonuclease A; deoxyribonuclease; deoxyribonuclease (pancreatic); Deoxyribonucleic phosphatase; deoxyribonuclease; DNase; DNA depolymerase; DNA endonuclease; DNA nuclease; DNase; DNase I; dornase; dornava; dornavac; E.C. 3.1.4.5; endodeoxyribonuclease I; Escherichia coli endonuclease I; pancreatic deoxyribonuclease; pancreatic dornase

SECTION 3: HAZARDS IDENTIFICATION

GHS Classification

Respiratory sensitizer - Category 2
 Skin sensitizer - Category 2

GHS Label elements, including precautionary statements:



Signal word: Warning

Hazard statements

H317 May cause an allergic skin reaction
 H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled

Precautionary statements

P280 Wear protective gloves/ clothing/ eye and face protection.
 P302 + P352 If on skin, wash with plenty of soap and water.
 P304 + P340 If inhaled, remove victim to fresh air and keep at rest in a position comfortable for breathing.
 P305 + P351 + P338 If in eyes, rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

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SECTION 4: FIRST-AID MEASURES

In case of eye contact, rinse thoroughly with plenty of water for at least 15 minutes. Consult a physician.

In case of skin contact, wash off immediately with soap and plenty of water removing all contaminated clothes and shoes.

In case of inhalation, move to fresh air. If breathing becomes difficult, give oxygen.

In case of ingestion, rinse mouth with water and drink plenty of water afterwards.

SECTION 5: FIRE FIGHTING MEASURES

Not flammable.

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Use carbon dioxide, dry chemical, water spray or regular foam.

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH and full protective gear.

Hazardous decomposition products formed under fire conditions: Carbon dioxide, nitrogen oxides

Flash point:	Not determined
Explosion data – sensitivity to mechanical impact:	Not sensitive.
Explosion data – sensitivity to static discharge:	Not sensitive.

SECTION 6: ACCIDENTAL RELEASE MEASURES

For personal protection, use personal protective equipment. Avoid contact with skin, eyes and clothing. Ensure adequate ventilation.

For environmental precautions, prevent further leakage or spillage if safe to do so.

For cleaning up, carefully wipe up or moistened with water. Pick up and transfer to properly labeled containers. After material pickup is completed, ventilate area and wash spill area.

SECTION 7: HANDLING AND STORAGE

Handle in accordance with good industrial hygiene and safety practice.

Keep containers tightly closed in a dry and well-ventilated place. Protect from sunlight.

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SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Respiratory protection	Irritation is experienced if exceeded exposure limits. NIOSH/MSHA approved respiratory protection should be worn at all time. In case of exposure to high airborne contaminant concentrations, positive pressure-supplied air respirators may be required. Respiratory protection must be provided in accordance with current local regulations.
Skin and body protection	Wear protective gloves/clothing.
Eye/Face protection	Tightly fitting safety goggles.

Use engineering measures such as showers, eyewash stations and ventilation system.
Handle in accordance with good industrial hygiene and safety practice.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	White to off-white
Physical state:	Powder
Odor:	No information available
Odor threshold:	No information available
Density:	No information available
pH:	pH6-8
Melting point:	No information available
Freezing point:	No information available
Initial Boiling point:	No information available
Boiling point:	No information available
Flash point:	Not applicable
Autoignition temperature:	No data available
Decomposition temperature:	No information available
Upper Flammability limit in air:	No data available
Lower Flammability limit in air:	No data available
Explosive properties:	No information available
Oxidizing properties:	No information available
Solubility:	Water soluble
Partition coefficient (n-octanol/water):	No data available
Vapor pressure:	No data available
Vapor density:	No data available
Evaporation rate:	No data available
Specific gravity:	No information available
Viscosity:	No information available

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SECTION 10: STABILITY AND REACTIVITY

Stable under recommended storage conditions.

Materials to avoid:	None known based on information supplied.
Hazardous decomposition products:	No information available.
Hazardous polymerization:	Hazardous polymerization does not occur.
Conditions to avoid:	None known based on information supplied.

SECTION 11: TOXICOLOGICAL INFORMATION

Acute toxicity:

Sensitizer.

Chronic Toxicity:

No known effect based on the information supplied.

Target organ effects: None known.

To the best of our knowledge, the chemical, physical and toxicological properties have not been thoroughly investigated.

SECTION 12: ECOLOGICAL INFORMATION

Ecotoxicity:

The environmental impact of this product has not been fully investigated.

SECTION 13: DISPOSAL CONSIDERATIONS

Dispose waste material in accordance with all federal, state and local environmental regulations.

For contaminated packing, dispose as waste material.

SECTION 14: TRANSPORT INFORMATION

DOT

Not regulated

IATA

Not regulated

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SECTION 15: REGULATORY INFORMATION

International Inventories

TSCA	Does not comply
EINECS/ELINCS	Does not comply
ENCS	Does not comply
IECSC	Does not comply
KECL	Does not comply
PICCS	Does not comply
AICS	Does not comply

U.S. Federal Regulations

SARA 313 Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulation, Part 372:

SARA 311/312 Hazard Categories

Acute Health Hazard	Yes
Chronic Health Hazard	No
Fire Hazard	No
Sudden Release of Pressure Hazard	No
Reactive Hazard	No

Clean Water Act

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)

This product does not contain any substances regulated as hazardous air pollutants (HAPS) under Section 112 of the Clean Air Act Amendments of 1990.

U.S. State Regulations

California Proposition 65 This product does not contain any Proposition 65 chemicals.

International Regulations

Mexico – Grade No information available.

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WHMIS Hazard Class

D2A Very toxic materials

D2B Toxic materials



SECTION 16: OTHER INFORMATION

The information contained in this MSDS relates only to the material(s) designed and does not relate to use(s) in combination with any other material, process(es) and /or chemical reaction(s). Vivantis Technologies Sdn. Bhd. provides this information in good faith, from sources believed to be accurate; however, Vivantis assumes no liability for its accuracy or completeness, and thus shall not be held liable for any damage resulting from handling or from contact with the above product.

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